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LISTS OF SPECIES

Mammalia, Didelphimorphia and Rodentia, central Santa Fe Province, Argentina

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ABSTRACT: Three owl pellets samples collected in the localities of Pedro Gómez Cello (= Estación Km. 197; 30°02'14" S, 60°18'56" W), Colonia Silva (= Estación Abipones; 30°26'59" S, 60°25'58" W) and Jacinto L. Arauz (30°44'01" S, 60°58'31" W), Province of Santa Fe, Argentina, were studied. We registered 11 genera of small mammals, including Didelphidae marsupials (1 species), and Caviidae (1), Cricetidae (10), and Muridae (1) rodents. We documented the southernmost record for *Pseudoryzomys simplex* and the first and second recording localities for Santa Fe of *Oligoryzomys nigripes* and *Graomys chacoensis*, respectively.

INTRODUCTION

The Great American Chaco occupies more than 1,000,000 km^2 in the political territories of Argentina, Brazil, Bolivia and Paraguay (Olson *et al.* 2001). This eco-region is divided in an occidental dry sector and in an eastern humid one, which reaches the north-central part of Santa Fe Province (Argentina), being its southernmost expression (Burkart *et al.* 1999). At this place, the Humid Chaco is intermixed with the floristic communities of the Espinal, an endemic eco-region of Argentina (Burkart *et al.* 1999). Small mammal assemblages for this sector, except for some minor references (*e.g.* Massoia *et al.* 1995; Pardiñas *et al.* 2004; Pautasso 2008), remain almost unknown (Galliari and Goin 1993). This situation is better reflected in the scarce number of recording localities for marsupials and rodents with voucher specimens in the central and northern parts of the Santa Fe Province (see Pautasso 2008). In this note, we documented the small terrestrial mammal species of three localities placed in the transitional area between the Humid Chaco and the Espinal. In addition, we make some biogeographical comments regarding the reported species.

MATERIALS AND METHODS

We studied skull and mandible remains found in three Barn Owl (*Tyto alba*; Aves, Tytonidae) pellet samples collected in the localities of: 1- Pedro Gómez Cello (= Estación Km. 197; 30°02'14" S, 60°18'56" W), 2- Colonia Silva (= Estación Abipones; 30°26'59" S, 60°25'58" W) and 3- Jacinto L. Arauz (30°44'01" S, 60°58'31" W) (Figure 1). Taxonomic identifications were made trough the comparison with voucher specimens housed in the *Colección de Mamíferos del Centro Nacional Patagónico* (Puerto Madryn, Chubut, Argentina) and literature. Fragmentary remains of small specimens of *Calomys* and *Oligoryzomys*, and young individuals of *Rattus* are difficult to identify to species level (e. g., Massoia 1973; Pardiñas and Lezcano 1995), thus we used an open taxonomy. Studied materials are deposited in the *Colección de Material de Egagrópilas y Afines "Elio Massoia"* of the *Centro Nacional Patagónico*, under the access numbers CNP-E 196 (Colonia Silva), CNP-E 200 (Pedro Gómez Cello) and CNP-E 460 (Jacinto L. Arauz).

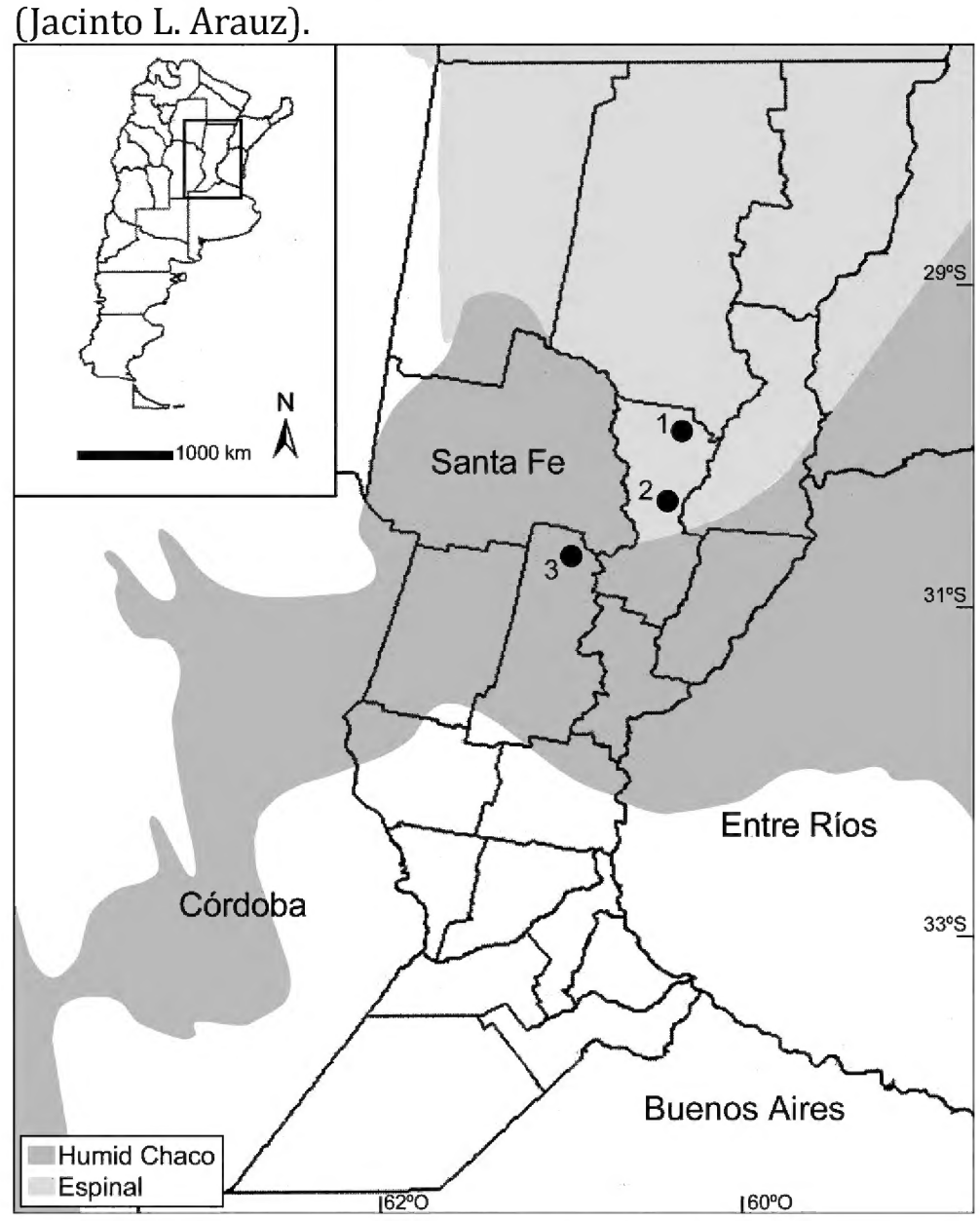

FIGURE 1. Map of the study area, central-eastern Santa Fe Province, Argentina: 1. Pedro Gómez Cello; 2. Colonia Silva; 3. Jacinto L. Arauz.

RESULTS AND DISCUSSION

Micromammal assemblages for the three studied samples are given in Table 1. The sigmodontine rodent *Akodon azarae* (Fischer, 1829) was the best represented species, followed by moderate frequencies of *Calomys* spp.,

a small form of the genus *Oligoryzomys*, *Holochilus chacarius* Thomas, 1906, and *Necromys lasiurus* (Lund, 1840) (Table 1). Both *A. azarae* and *Calomys* spp. [including *C. laucha* (Fischer, 1814) and *C. musculinus* (Thomas, 1913)] are abundant species in the grasslands, pasturelands, and agro ecosystems of the Chaco-Pampean plains (*e.g.* Kravetz *et al.* 1986). The record in sympatry between *Holochilus brasiliensis* (Desmarest, 1819) and *H. chacarius* enlarges to the west the co-occurrence area for these species in Argentina, that is extended like a fringe in both sides of the Paraná River from Eastern Formosa and northwestern Corrientes (Pardiñas and Teta 2005; Pardiñas *et al.* 2005) to the north of the Buenos Aires (Voglino *et al.* 2005). Judging by the studied samples and literature, *N. lasiurus*, including *N. benefactus* (Thomas, 1919) and *N. temchuki* (Massoia, 1982) (see D'Elía *et al.* 2008), has a more or less continuous distribution with moderately abundant populations in northwestern Argentina (*e.g.* Pardiñas and Teta 2005), that are gradually fragmented towards the Pampean and Espinal eco-regions (where its participation in the communities is much less conspicuous; see Galliari and Pardiñas 2000). Two small [*O. flavescens* (Waterhouse, 1837) and *O. fornesi* (Massoia, 1973)] and morphologically similar species of the rodent genus *Oligoryzomys* were documented for Santa Fe Province (Massoia *et al.* 1995; Romano *et al.* 2002). Its distributional ranges, especially in middle latitudes of the provinces, are far from being well established. *Oligoryzomys nigripes* (Olfers, 1818) is found at the first time in the Province of Santa Fe; the records for Pedro Gómez Cello and Jacinto L. Arauz enlarges ca. de 250 km to the SW the known distribution of this rodent. In the case of *Graomys chacoensis* (Allen, 1901), the only previous record for the province corresponds to the Departamento La Capital [cited as *G. griseoflavus* by Pautasso (2008)], being the record presented here the second for the province (cf. Ferro and Martinez 2009). This finding also enlarges the known distributional range of this sigmodontine more than 300 km to the east. The record for *Pseudoryzomys simplex* (Winge, 1887) in Pedro Gómez Cello constitutes the southernmost reference for this species (Pardiñas *et al.* 2004). Finally, in the case of *Scapteromys aquaticus* Thomas, 1920 the studied materials from Pedro Gómez Cello extend its distribution ca. 45 km to the west.

Within the order Didelphimorphia, the unique recorded species was *Cryptonanus chacoensis* (Tate, 1931) in Pedro Gómez Cello. In Santa Fe Province, this small didelphid had only two previous records in the Departamento La Capital, near the coast of the Paraná River (Pautasso 2008).

Part of the records documented in this note enlarges significantly the known distributional range of some sigmodontine rodent species. In the other cases they contribute with a better delimitation of the distributional ranges of species that have a few adequately documented records (*e.g. C. chacoensis*). Some questions posed in this note (*e.g.* how many small species of *Oligoryzomys* are present in Santa Fe? What are their distributions?) emphasize the need of intensive fieldworks in Santa Fe province. This is especially important because this region constitutes the southernmost distributional limits of some Brazilian small mammals (*e.g. O. fornesi*, *P. simplex*) within a rich biogeographical scenario produced by the intermingled of two main eco-regions, the Chaco and the Espinal.

Table 1. Terrestrial micromammals found in Barn Owl pellet samples in the localities of Pedro Gómez Cello, Colonia Silva, and Jacinto L. Arauz (Santa Fe Province, Argentina).

	Pedro Gómez Cello	Colonia Silva	Jacinto L. Arauz
Akodon azarae	53	71	61
Calomys cf. *C. laucha-C. musculinus*	8	25	68
Cavia aperea	8	-	1
Cryptonanus chacoensis	8	-	-
Graomys chacoensis	-	-	3
Holochilus brasiliensis	-	-	3
Holochilus chacarius	35	11	4
Necromys lasiurus	11	16	14
Oligoryzomys cf. *O. flavescens-O. fornesi*	25	27	21
Oligoryzomys nigripes	5	-	7
Pseudoryzomys simplex	25	-	-
Rattus sp.	1	-	-
Scapteromys aquaticus	6	-	-
	185	150	182

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